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INTERNATIONAL DEVELOPMENT ASSOCIATION

REPORT AND RECOMMENDATION

OF THE

PRESIDENT

TO THE

EXECUTIVE DIRECTORS

ON A

PROPOSED CREDIT

TO

THE REPUBLIC OF KOREA

FOR AN

AGRICULTURE CREDIT PROJECT

May 3, 1972

INTERNATIONAL DEVELOPMENT ASSOCIATION

REPORT AND RECOMMENDATION OF THE PRESIDENT TO THE EXECUTIVE DIRECTORS ON A PROPOSED CREDIT TO THE REPUBLIC OF KOREA FOR AN AGRICULTURE CREDIT PROJECT

1. I submit the following report and recommendation on a proposed development credit in an amount in various currencies equivalent to \$10.5 million to the Republic of Korea for an agriculture credit project.

PART I - BANK GROUP OPERATIONS

2. Korea has received seven IDA credits amounting to \$80.0 million and seven Bank loans amounting to \$227.5 million. The disbursed amount, \$3.1 million IDA credit No. S-4 KO of \$3.5 million for highway studies and engineering was refinanced under a subsequent Bank loan of \$54.5 million for highway construction (No. 769-KO); the balance of the IDA credit was cancelled. Total Bank Group lending to Korea, taking this refinancing and cancellation into account, is thus \$304 million. The largest share, \$134.2 million, has gone to the transport sector - \$79.7 million for railways and \$54.5 million for highways. The Korea Development Finance Corporation (KDFC) has received \$55 million in Bank loans for relending to private industry. The balance of the Bank Group's past lending is accounted for by \$100 million for irrigation and livestock and \$14.8 million for education. A statement of Bank loans, IDA credits and IFC investments is given as Annex I.

3. Of the total Bank Group lending of \$304.0 million, almost \$215 million remained undisbursed as of March 31, 1971. This is explained in large part by the fact that withdrawals under several of the large loans made within the past 1½ years are only now beginning and in part by the small volume of disbursements, as yet, under a 1969 loan of \$45 million for the Pyongtaek-Kumgang Irrigation Project. The original borrower under this project, the Union of Land Improvements Association, was dissolved shortly after the loan was made and replaced by the Agricultural Development Corporation. It also took longer than expected to employ consultants to supervise the execution of the project. The project consequently fell about a year behind schedule, but is now well under way and may be completed within the original timetable. The first education project was also slow in getting started because of delays in organizing the project team but is now progressing satisfactorily.

4. IFC has made four investments in Korea and its holdings amount to \$8.1 million in loans and shares. The latest of these, made last year, was an investment of about \$0.7 million equivalent in the shares of the Korean Investment and Finance Corporation - a new institution which will assist in the development of the capital and money markets. Further investment possibilities are being investigated.

PART II - THE ECONOMY

5. A report entitled "The Economic Situation and Prospects of the Republic of Korea" (EAP-25a, dated September 13, 1971) was circulated to the Executive Directors and members of the Consultative Group on September 17, 1971. Country data are in Annex II.

6. Korea completed its second Five Year Plan in 1971 with an impressive record of economic growth. In the latter half of the 1960's, GNP, in real terms, increased at an annual rate of more than 11 percent; per capita income, which rose by about 7½ percent per annum throughout the last decade, reached a level of \$258 by the end of 1971. Industrialization and exports played a leading role in Korea's economic progress together with rapid expansion of the infrastructure. Agricultural output rose satisfactorily by international comparisons at an average of 3 - 4 percent per annum but was far out-distanced by industry. A progressively diversified industrial sector is now the prominent feature of an economy which was largely agricultural at the beginning of the sixties. In the process unemployment fell from about 10 percent in the early sixties to 4 or 5 percent today. Unemployment in agriculture has been sharply reduced, in part because of the drift of labor towards urban industrial areas.

7. The rapid growth in output was accompanied by a marked decline in the population growth rate from nearly 3 percent a year in 1960 to less than 2 percent at present as a result of an active family planning program and a population receptive to birth limitation.

8. Rapid economic growth has contributed to the economic welfare of the population as a whole. Income differences between rich and the poor may be larger than they were a decade ago but the living conditions of the poor have been greatly improved with the sharp drop in unemployment, the large increase in labor productivity and an accompanying rise in wage rates, the growth of the off-farm income of small farmers, and the rise of farm prices over the last few years.

9. The impressive economic growth of the last 10 years, however, has not been achieved without cost. Continuous inflation, an increasing balance of payments deficit, heavy external indebtedness, and a relative lag in agriculture are some of the maladjustments associated with rapid development. The Government intends to concentrate its efforts during the next few years on correcting these maladjustments as well as adapting the economy and the balance of payments to the effects of the progressive withdrawal of U.S. troops from Korea and of Korean troops from Vietnam.

10. The main objectives of the Third Five Year Plan (1972-76) are to effect structural changes in agriculture and industry and to achieve a large increase in exports within a relatively stable financial framework and a manageable balance of payments. The Government intends to pursue restrained investment policies and to hold the rate of growth to an average of 8.6 percent per annum. This year's growth rate is likely to be

down to the plan level or perhaps below it, without significant adverse effects on employment. Korea faces internal financial problems associated with slower growth for businesses which have been geared to high growth rates and expectations; further, inflation persists despite this year's slower economic pace. The export picture, however, continues to be bright as ambitious targets are so far being reached despite international restrictions on textile exports. Nevertheless, investment outlays are still large and imports are so far running ahead of plan levels. Even after the impressive gains in savings to the level of 15 percent of GNP in 1971 (compared to about one-half of this rate in the mid-1960's) a wide gap will remain between savings and investment. This gap will have to be met by external finance.

11. The Government is fully aware of the difficulties which it faces. Its problem now is to steer a course in the short term which will enable it to achieve a reasonable degree of stability without adversely affecting the chances of reaching the targeted growth rates for the Plan period. A new economic team has recently come into office and is reviewing the alternatives; some steps have already been taken - these include a further adjustment of the exchange rate following last year's devaluation and the introduction of measures to encourage import substitution. A Bank economic mission is scheduled to visit Korea this summer to review and discuss these policies with the Government.

PART III - BANK STRATEGY

12. In the short term, even if the Government succeeds in its policies of restraint, Korea will undoubtedly require increased amounts of external capital. In this context, prudent debt management will be crucial. The Government is attempting to meet its foreign exchange requirements with less reliance on short term borrowings than in the past. The debt service ratio is about 21 percent and is not expected to increase much beyond this during the next few years, provided the Government continues to limit short-term borrowing. Korea has the capacity to continue to sustain further debt on conventional terms. However, the difficult balance of payments situation, and Korea's low per capita income, make it appropriate that some of the assistance it receives from the Bank Group should be on IDA terms.

13. In support of the Government's attempt to redress the imbalance between agriculture and industry, the Bank Group's lending strategy aims at supporting agricultural development. We will also support education and help to modernize and expand infrastructure. Projects under Bank Group consideration in these sectors have small foreign exchange elements. In spite of a commendable savings effort, there remains a gap between savings and investment, which cannot be entirely covered by financing the foreign currency component of high priority projects. In these circumstances some local expenditure financing is appropriate. Many of the projects with a large foreign exchange component are in private industry and financed from private sources and export credit agencies. The Bank Group itself is helping industry through its support of the Korea Development Finance

Corporation. Support for another development finance company, the Korea Development Bank, is now under consideration, and the Bank Group is also looking for ways to support industry directly. Operations being prepared for the next fiscal year include a fourth loan for railways development, a further loan to KDPC, and lending for education, tourism, and port development projects.

PART IV - THE PROJECT

THE AGRICULTURAL SECTOR

14. Agriculture provides a livelihood for about half of the population of 32 million, but contributes only about 28 percent to GNP. The country is rugged and mountainous, with forests covering over two-thirds of the land area. Because of the generally poor quality of the timber and the inaccessibility of much of the forest land, forestry contributes little to value added in agriculture. During and after the Korean War many of the hills were stripped to provide fuel, and the Government has undertaken a program of reforestation which has been quite successful; this was, however, directed at controlling soil erosion and not timber production. The fishery industry, though relatively small, earns an appreciable amount of foreign exchange, and significant efforts have been made to modernize the coastal and deep-sea fishing fleets. The average farm size is less than one hectare; and most farming is not commercially oriented. Roughly half of the total cultivated area produces more than one crop each year, as a result of inter-planting and double cropping. Livestock production has increased substantially during the past five years, and the Government is upgrading the quality of beef and dairy herds through cattle imports and fattening programs.

15. Total gross public and private investment during the Third Plan is estimated at 4,525 billion Won (\$12 billion), of which 536 billion Won (\$1.4 billion) has been allocated to agriculture, forestry and fishery. This is almost double their share during the Second Plan (1967-71). The major emphasis will be placed on the distribution of improved seeds, farm mechanization, and the consolidation of fragmented holdings and providing them with new and improved irrigation, drainage and roads. Most of these activities are geared to the Government's objective of achieving self-sufficiency in rice by 1976. Rice production has fluctuated slightly around the plateau of 4 million tons a year which was reached some 5 years ago. In 1971, the poor crop necessitated imports of close to 1 million tons.

16. The Government, in addition to its major concern to increase foodgrain production, is also trying to stimulate other activities such as sericulture, livestock, and the cultivation of fruit orchards. To attain these objectives, the Government intends to provide adequate storage for agricultural commodities and to sponsor research into and production of high-yielding seeds, to support farm mechanization and to encourage more intensive use of fertilizer and pesticides. Besides these specific areas the Government has an ambitious program to improve the rural environment during the five years of the Third Development Plan through more rural electrification, expansion of the telecommunications network, improvement of rural housing, modernization of the water supply systems and the provision of better medical care. As mentioned in paragraph 13, above, the

Bank Group envisages providing substantial support to the Government's efforts to diversify and modernize agriculture. To prepare for this, it is planned to send an agriculture sector survey mission to Korea in late 1972.

PROJECT ASPECTS

17. The provision of medium and long term credit to farmers is an important element in the Government's strategy of expanding and diversifying agricultural production. The proposed project will extend financial support to farmers to enable them to meet investment plans which they have been unable to realize because of a shortage of credit and will help to strengthen the principal agency for agricultural credit in Korea - the National Agricultural Cooperative Federation (NACF).

18. The project consists of part of NACF's lending program over the next three years. NACF will make sub-loans to about 12000 farmers who have holdings of between 1 to 3 hectares. Investment will be for a mix of farm enterprises under four categories (a) apple, grape, pear and peach orchards (b) sericulture (c) mushroom growing (d) poultry and swine breeding. The project will also provide technical services to NACF and strengthen its training of staff.

19. The total cost of the project is estimated at \$18.2 million equivalent; of this about \$3.1 million will be in foreign exchange. The proposed IDA credit will finance the foreign exchange expenditures and \$7.4 million of local costs, that is, about 58 percent of total project costs. The remaining costs will be financed by the Government (23%) and project farmers (19%). The proceeds of the IDA credit together with the Government's contribution of ₩1400 million will be relent by the Government to NACF to be placed in a "Special Fund". NACF will pay interest at the rate of 7% per annum and have the use of the Government funds and the proceeds of the IDA credit for a period of at least 15 years. The terms on which the "Special Fund" will be maintained will be discussed by the Government, NACF and the Association upon completion of the study referred to in paragraph 22 below. The main features of the project are described in Annex III.

20. NACF forms the apex of the cooperative structure in Korea. Its membership consists of 140 kun (county) cooperatives and 150 specialized cooperatives of orchard and livestock farmers. Its headquarters are in Seoul and it has a branch office in each province. NACF was established in 1961 and now has a staff of about 1500 including a number with technical knowledge of agriculture, livestock and animal husbandry. It has a number of banking, trading and promotional functions such as the provision of credit, purchasing, supply of inputs, marketing, extension services, processing and mutual insurance.

21. NACF's paid in capital and reserves totalled ₩2.6 billion at the end of 1970 compared with short and long term liabilities of ₩115 billion. This unsatisfactory debt equity ratio has resulted from poor

profits, and the rapid increase in operations over the last few years. The Government and NACF recognize the necessity of strengthening the latter's financial situation. Two of the steps to attain this end are: (a) the Government's assurance to IDA that ₩661 million will be provided to NACF by the end of 1973 to help write off part of its bad debts; and (b) NACF's assurance that kun cooperatives will be required to invest in NACF's shares to the extent of at least 3% of their borrowing from it by the end of 1974. This should yield an additional ₩2.5 billion to NACF.

22. In view of NACF's financial situation and its crucial position in Korean agriculture, about \$200,000 of the proceeds of the proposed IDA credit will be used by NACF to finance the foreign exchange costs of a study by an international firm of management consultants to determine how its organization, operating procedures and policies and accounting could be improved and NACF's financial position be strengthened. The study will extend as necessary to the operation of the kun cooperatives. The Government has undertaken to discuss with the Association the consultants' recommendations and to agree on the measures required to implement them.

23. The proposed project will require a substantial increase in the number of staff trained in loan appraisal, both for NACF itself and for participating cooperatives. To meet this need, the Cooperative College operated by NACF will give a series of special training courses each of 6 to 8 weeks in the appraisal of loan applications from farmers, including the examination of the technical feasibility of projects and their investment and operating costs, the analysis of incremental revenues arising from project investments, farmers' repaying capacity and in follow-up and supervision procedures. To handle these special courses and to improve the regular two year courses, \$215,000 from the proceeds of the proposed IDA credit will be used by NACF to help finance the expansion and improvement of the Cooperative College's training installations with special emphasis on the practical aspects of agricultural credit.

24. The bulk of the proposed credit (i.e. \$10 million) will be used to make sub-loans for investments by farmers, which will complement ongoing Government programs for irrigation, drainage, storage, land improvement and consolidation and encourage the greater use of high grade farm inputs, seeds and planting materials. Participating farmers will also be helped to adopt modern technology. Sub-loans will be made on the basis of farm development plans prepared by farmers with the help of kun cooperative loan officers. Only farmers who had made some investment and have activities covered by the project will be eligible to receive financing. The demand for credit is such that no difficulties in disbursing the proceeds of the credit are expected.

25. About eighty percent of sub-loans will be channeled by NACF to the ultimate beneficiaries through kun cooperatives; the remaining 20% or so will be made directly by NACF to farmers. NACF will relend to the kun cooperatives at an interest rate of 9% per annum. The terms of the sub-loans will vary according to the purpose of the loan but will range between 5 to 12 years.

26. Interest rates charged to farmers on NACF funds vary according to their source and the purpose of their loan. The present interest rate of 9% on medium and long term loans is unduly low compared to commercial rates which are of the order of 20%. As a move to bring interest rates for agricultural lending closer in line with commercial rates and pending the completion of the Bank Group's proposed agricultural sector survey, the interest charged to farmers under this project would be raised to 12%.

27. The items to be procured under the project are diverse and the likely size of individual purchases is small. In these circumstances, international competitive bidding would be inappropriate. Procurement will therefore be through normal cooperative and commercial channels which are well developed. The supply of the items required is adequate.

28. Farm models show financial rates of return ranging from 18 percent to 58 percent. Varied sensitivity tests were applied to each model. The financial rates of return remain satisfactory in all cases. The rate of return to the economy would be 38 percent, ranging from 18 percent for sericulture to more than 100 percent for poultry and swine. Sensitivity tests applied to the costs and benefits still give satisfactory rates of return.

29. Accurate data on the net employment resulting from the project are not available; however, increased labor requirements for farm exploitation will increase working hours for labor that is already employed and also generate opportunities for employing additional people. The equivalent of full-time jobs generated by the project would be about 6,000. The incremental wages to be paid would average W850 million (US\$2.3) million a year. This does not include the incremental employment and earnings generated by processing and marketing.

PART V - LEGAL INSTRUMENTS AND AUTHORITY

30. The draft Development Credit Agreement between the Republic of Korea and the Association, the draft Project Agreement between the Association and the National Agricultural Cooperative Federation, the Recommendation of the Committee provided for in Article V, Section 1(d) of the Articles of Agreement and the text of a Resolution approving the proposed Development Credit are being distributed separately to the Executive Directors. The draft Credit and Project Agreements follow the pattern of agreements for similar projects.

31. I am satisfied that the proposed Credit would comply with the Articles of Agreement of the Association.

PART VI - RECOMMENDATION

32. I recommend that the Executive Directors approve the proposed Credit.

Robert S. McNamara
President

Attachments

ANNEX IREPUBLIC OF KOREASUMMARY STATEMENT OF LOANS, CREDITS AND IFC INVESTMENTS
(as of March 31, 1972)LOANS AND CREDITS:

<u>Loan or Credit No.</u>	<u>Year</u>	<u>Borrower</u>	<u>Purpose</u>	<u>Bank</u>	<u>Amount (Less Cancellations) (US \$ million)</u>	
					<u>IDA</u>	<u>Undisburse</u>
25	1962	Republic of Korea	Railway		14.0	-
110	1967	Republic of Korea	Railway		10.7	-
529	1968	KDFC	Dev. Fin. Co.	5.0		0.1
600	1969	ADC	Irrigation	45.0		40.7
151	1969	Republic of Korea	Education		14.8	14.3
622	1969	KDFC	Dev. Fin. Co.	20.0		5.6
669	1970	Republic of Korea	Railway	40.0		18.7
183	1970	Republic of Korea	Railway		15.0	0.1
234	1971	Republic of Korea	Livestock		7.0	6.5
735	1971	KDFC	Dev. Fin. Co.	30.0		28.8
769	1971	Republic of Korea	Highway	54.5		51.1
283					15.0	15.0
795				33.0		33.0
Total				227.5		213.9
of which has been repaid				.6		
Total now outstanding				226.9		
Amount sold				1.0		
Total now held by Bank and IDA				225.9	76.5	
Total undisbursed				178.0	35.9	213.9

IFC INVESTMENTS

			<u>US \$ million</u>	
			<u>Loans</u>	<u>Shares</u>
1968	KDFC		-	0.7
1969	Honam Silk Company		1.4	0.3
1970	Atlas Paper Company		4.5	0.5
1971	Korea Investment and Finance Corp.			0.7
Total			5.9	2.2

REPUBLIC OF KOREA

COUNTRY DATA

<u>Area</u>	98,438 sq. km.		
<u>Population</u> (mid-1970)	32.58 million		
Growth rate (mid-1970 - mid-1971)	2.1%		
Density (per sq. km.)	331		
<u>Gross National Product</u>			
Total (1971 at current prices)	3,113 billion Won		
Annual average real rate of growth (1966-71)	11.7%		
Per Capita GNP (1971)	\$258 equivalent		
<u>Industrial Origin of Real GNP (1971)</u>	100%		
Agriculture, Forestry and Fisheries	26.1%		
Mining and Manufacturing	23.9%		
Social Overhead, Construction and Other Services	50.0%		
<u>Composition of Gross National Expenditures</u> (current prices; in %)	<u>1965</u>	<u>1970</u>	<u>1971^{a/}</u>
Consumption	92	84	85
Private	83	73	n.a.
Public	9	11	n.a.
Gross Capital Formation	15	26	25
Gross National Saving	8	16	15
Public	2	7	n.a.
Private	6	9	n.a.
Resource Gap	7	10	10
<u>Public Finance</u> (current prices, in billion Won)			
Current Revenue	91	514	634
Current Expenditure	81	324	408
Current Surplus	10	190	226
Capital Expenditure	41	266	355
Overall Deficit	31	76	129
<u>Money and Credit</u> (annual rate of change in percent)			
Money Supply	33	41	18
Quasi-Money	112	29	28
Domestic Credit	42	32	28

a/ Preliminary estimates.

	1965	1970	1971 ^{a/}
<u>Price Indices (percent increase)</u>			
Consumer Prices (Seoul)	13.6	12.7	7.0
Wholesale Prices	10.0	9.1	13.0
<u>Balance of Payments (in million U. S. \$)</u>			
Exports, goods	175	882	1130
Imports, goods	420	1804	2185
Trade Balance	(-)245	(-)922	(-)1055
Services, net	46	119	59
Goods/Services Balance	(-)199	(-)803	(-)996
Transfers, net	203	180	198
Long-term Capital, net	12	484	458
Short-term Capital net ^{b/}	-2	173	291
Capital Balance	10	657	749
Overall Balance	14	34	-49
<u>International Liquidity</u> (in million U. S. \$: end of period)			
Gross Foreign Reserves	146	610	571
Month's Imports of Goods & Services	4	3	3
IMF Quota	18.8	50	86.9
IMF Drawings (outstanding)	-	-	8.1

External Debt

Total outstanding external debt (disbursed) with maturity of over one year at the end of 1971: \$2,470 million (estimated)

Amortization and interest payment: on these debts during 1970 was \$330 million (estimated) or 20.3% of exports of goods and services.

Exchange Rate (end of 1971; fluctuating exchange rate). 373 Won to the dollar.

	1960	1965	1970	1975 ^{c/}
<u>Social Indicators</u>				
Population Growth Rate (%)	2.88	2.70	2.04	1.60
Urban Population Growth Rate (%) average for preceding 5 years)	5.8	5.8	5.0	4.6
Birth Rate (per 1,000 population)	42.0	37.4	28.0	22.3
Family Planning (1,000 acceptors)	-	430	775	900
School Enrollment, Primary (%)	84	87	97	n.a.
Literacy Rate (%)	71	85	90	n.a.
Unemployment Rate (%)	8.4	7.4	5.0	n.a.
Population per Hospital Bed	2,510	2,520	2,000	1,606

a/ Preliminary estimates.
b/ Includes net errors and omissions.
c/ Bank estimates.

Composition of External Public Borrowings^{a/}
(in % of total commitments)

	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>
<u>Suppliers</u>	<u>51.4</u>	<u>77.5</u>	<u>57.4</u>	<u>38.5</u>	<u>27.7</u>
Germany	4.9	6.4	8.3	1.8	0.7
Japan	40.7	18.3	17.8	6.1	8.6
U. S. A.	1.2	29.4	14.9	14.5	10.7
<u>Private Banks</u>	<u>0.6</u>	<u>1.8</u>	<u>10.5</u>	<u>11.7</u>	<u>8.6</u>
<u>International Organizations</u>	<u>-</u>	<u>1.8</u>	<u>2.8</u>	<u>14.8</u>	<u>13.4</u>
World Bank Group	-	1.8	1.5	11.2	9.8
Asian Development Bank	-	-	1.3	3.6	3.6
<u>Governments</u>	<u>47.4</u>	<u>13.4</u>	<u>27.5</u>	<u>21.9</u>	<u>37.9</u>
Japan	14.3	6.9	3.5	9.5	1.6
U. S. A.	29.5	6.4	24.2	11.7	32.1
<u>Others</u>	<u>0.6</u>	<u>5.4</u>	<u>1.8</u>	<u>13.1</u>	<u>12.5</u>
<u>Total</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
(Total new commitments in US\$ million)	(329)	(596)	(545)	(703)	(560)

a/ Medium and long-term loans including publicly-guaranteed loans,
reported to OECD/IBRD.

DESCRIPTION OF AGRICULTURE CREDIT PROJECT

<u>Borrower:</u>	Republic of Korea
<u>Beneficiary:</u>	The National Agricultural Cooperative Federation (NACF)
<u>Purpose:</u>	To help finance: (a) loans, over a three-year period to approximately 12,000 farmers engaged in the cultivation of fruit orchards, sericulture, mushroom production and the breeding of poultry and swine; (b) the foreign exchange costs of an organizational and accounting study of NACF; and (c) the strengthening of NACF's training facilities.
<u>Amount:</u>	\$10.5 million
<u>Amortization and Service Charge:</u>	Standard
<u>Relending Terms:</u>	Government will relend the proceeds of the credit to NACF for a minimum of 15 years at an interest rate of 7% per annum. NACF will, in turn, either: (a) relend the proceeds of the credit to participating cooperatives at an interest rate of 9%; the cooperatives will charge participating farmers interest at the rate of 12% and terms will vary according to the purpose of the sub-project; or (b) lend directly to project farmers for variable periods of time depending on the purpose of the sub-project at an interest rate of 12% per annum.

Allocation of Proceeds of Credit

Loans to Beneficiaries	US\$10,000,000
Training and Experts	290,000
Consultant Services	210,000
	<u>US\$10,500,000</u>

Cost Estimates

- - - - (US \$ Million) - - - -

	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
<u>Orchards</u>			
Apples	2,189	416	2,605
Grapes	1,521	268	1,789
Peaches	909	172	1,081
Pears	1,176	224	1,400
<u>Sericulture</u>	5,084	827	5,911
<u>Mushroom</u>	1,675	295	1,970
<u>Poultry and Swine</u>			
Layers	1,224	306	1,530
Broilers	865	176	1,041
Hogs	162	30	192
Sub-Total:	14,805	2,714	17,519
<u>Technical Services</u>			
Expert Services	6	75	81
Management Consultants	79	210	289
<u>Training Facilities</u>	241	59	300
Total Project Cost:	<u>15,131</u>	<u>3,058</u>	<u>18,189</u>

April 24, 1972

Benefits

-----('000 m tons)-----

	<u>Cropped Area (ha)</u>		<u>Production</u>		
	<u>Present</u>	<u>After Development</u>	<u>Present</u>	<u>At Full Development</u>	<u>Increment</u>
a) <u>Major Crops and Products</u>					
Apples	800	1,600	16.0	41.6	25.6
Grapes	180	900	2.2	11.4	12.2
Peaches	300	1,200	3.0	20.7	17.7
Pears	500	1,000	10.0	24.0	14.0
Sericulture	1,800*	3,600*		1.8	1.8 Cocoons
Mushroom	-	14		3.2(3.5)	
Layers	-	-		122.0	122.0(million of eggs)
Broilers	-	-		4.6	4.6
Hogs	-	-	0.2	1.1	0.9

* Mulberry plantation

	<u>Size of Unit</u>	<u>Present</u>	<u>At Full Development</u>	<u>Increment</u>
	<u>After Development</u>	-----('000 won)-----		
b) <u>Annual Gross Farm Income</u>				
Apples	2.0 ha	1,449	3,640	2,191
Grapes	1.5 ha	382	1,848	1,466
Peaches	2.0 ha	265	1,191	412
Pears	2.0 ha	1,349	3,120	1,771
Sericulture	0.4 ha	306	437	131
Mushroom	0.7 ha	-	20,480	
Eggs	2,000 birds	-	5,714	
Broilers	4,000 birds	-	5,108	
Hogs	50	-	1,453	

April 25, 1972

Procurement
Arrangements:

Goods for on-farm investment through commercial channels.

Estimated Dis-
bursements:

(US\$ million)			
<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
2.3	3.5	3.7	1.0

Consultants:

- (1) Farm Management Specialist to assist NACF in formulating lending policies and procedures and training staff.
- (2) A firm of management consultants to study the organization, operational policies and accounting system of NACF.

Rate of Return:

Economic rate estimated at 37 percent. Rate on producer's investment estimated at from 18 to 58 percent.

Appraisal Report:

Report No. PA-121a, May 2, 1972, Agriculture Projects Department.